



C(PROGRAMMING : PATTERN)

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1. Print: 1

1 2

1 2 3

1 2 3 4

1 2 3 4 5

❖ Input:

```
#include <stdio.h>
```

```
int main() {
```

```
    int i, j;
```

```
    for(i = 1; i <= 5; i++) {
```

```
        for(j = 1; j <= i; j++) {
```

```
            printf("%d", j);
```

```
        }
```

```
        printf("\n");
```

```
    }
```

```
    return 0;
```

```
}
```

2. Print: 1 2 3 4 5

1 2 3 4

1 2 3

1 2

1

❖ **Input:**

```
#include <stdio.h>
```

```
int main() {
```

```
    int i, j;
```

```
    for(i = 5; i >= 1; i--) {
```

```
        for(j = 1; j <= i; j++) {
```

```
            printf("%d ", j);
```

```
        }
```

```
        printf("\n");
```

```
    }
```

```
    return 0;
```

```
}
```

3. Print: 5

5 4

5 4 3

5 4 3 2

5 4 3 2 1

❖ Input:

```
#include <stdio.h>
```

```
int main() {
```

```
    int i, j;
```

```
    for(i = 5; i >= 1; i--) {
```

```
        for(j = 5; j >= i; j--) {
```

```
            printf("%d ", j);
```

```
        }
```

```
        printf("\n");
```

```
    }
```

```
    return 0;
```

```
}
```

4. Print: 1

2 1

3 2 1

4 3 2 1

5 4 3 2 1

❖ Input:

```
#include <stdio.h>
```

```
int main() {
```

```
    int i, j;
```

```
    for(i = 1; i <= 5; i++) {
```

```
        for(j = i; j >= 1; j--) {
```

```
            printf("%d ", j);
```

```
        }
```

```
        printf("\n");
```

```
    }
```

```
    return 0;
```

```
}
```

5. Print: 5 4 3 2 1

5 4 3 2

5 4 3

5 4

5

❖ **Input:**

```
#include <stdio.h>
int main() {
    int i, j;

    for(i = 1; i <= 5; i++) {
        for(j = 5; j >= i; j--) {
            printf("%d ", j);
        }
        printf("\n");
    }
    return 0;
}
```

6. Print: 5 4 3 2 1

4 3 2 1

3 2 1

2 1

1

❖ **Input:**

```
#include <stdio.h>
```

```
int main() {
```

```
    int i, j;
```

```
    for(i = 5; i >= 1; i--) {
```

```
        for(j = i; j >= 1; j--) {
```

```
            printf("%d ", j);
```

```
        }
```

```
        printf("\n");
```

```
    }
```

```
    return 0;
```

```
}
```

7. Print: 1 2 3 4 5

2 3 4 5

3 4 5

4 5

5

❖ **Input:**

```
#include <stdio.h>
```

```
int main() {
```

```
    int i, j;
```

```
    for(i = 1; i <= 5; i++) {
```

```
        for(j = i; j <= 5; j++) {
```

```
            printf("%d ", j);
```

```
        }
```

```
        printf("\n");
```

```
    }
```

```
    return 0;
```

```
}
```


8. Print: 45

45 46

45 46 47

45 46 47 48

45 46 47 48 49

❖ Input:

```
#include <stdio.h>
```

```
int main() {
```

```
    int i, j;
```

```
    for(i = 45; i <=49; i++) {
```

```
        for(j = 45; j <= i; j++) {
```

```
            printf("%d ", j);
```

```
        }
```

```
        printf("\n");
```

```
    }
```

```
    return 0;
```

```
}
```

9. Print: 1

2 2

3 3 3

4 4 4 4

5 5 5 5 5

❖ **Input:**

```
#include <stdio.h>
```

```
int main() {
```

```
    int i, j;
```

```
    for(i = 1; i <= 5; i++) {
```

```
        for(j = 1; j <= i; j++) {
```

```
            printf("%d ", i);
```

```
        }
```

```
        printf("\n");
```

```
    }
```

```
    return 0;
```

```
}
```

10. Print: 5

4 4

3 3 3

2 2 2 2

1 1 1 1 1

❖ **Input:**

```
#include <stdio.h>
```

```
int main() {
```

```
    int i, j;
```

```
    for(i = 5; i >= 1; i--) {
```

```
        for(j = 5; j >= i; j--) {
```

```
            printf("%d ", i);
```

```
        }
```

```
        printf("\n");
```

```
    }
```

```
    return 0;
```

```
}
```

11. Print: 1
2 3
4 5 6
7 8 9 10
11 12 13 12 15

❖ **Input:**

```
#include <stdio.h>

int main() {

    int i, j, count = 0;

    for(i = 1; i <=5; i++) {
        for(j = 1; j <= i; j++) {
            count++;
            printf("%d ", count);
        }
        printf("\n");
    }

    return 0;
}
```

12. Print: A

B B

C C C

D D D D

E E E E E

❖ **Input:**

```
#include <stdio.h>
```

```
int main() {
```

```
    char i, j;
```

```
    for(i = 'A'; i <= 'E'; i++) {
```

```
        for(j = 'A'; j <= i; j++) {
```

```
            printf("%c ", i);
```

```
        }
```

```
        printf("\n");
```

```
    }
```

```
    return 0;
```

```
}
```

13. Print: 1

1 0

1 0 1

1 0 1 0

1 0 1 0 1

❖ **Input:**

```
#include <stdio.h>
```

```
int main() {
```

```
    int i, j, temp = 5;
```

```
    for(i = 1; i <= temp; i++) {
```

```
        for(j = 1; j <= i; j++) {
```

```
            if(j % 2 == 1) {
```

```
                printf("1");
```

```
            } else {
```

```
                printf("0");
```

```
            }
```

```
        }
```

```
        printf("\n");
```

```
    }
```

```
    return 0;
```

```
}
```

**14.Print: 1
 12
 123
 1234
 12345**

❖ **Input:**

```
#include <stdio.h>
```

```
int main() {
```

```
    int i, j, k;
```

```
    for(i = 1; i <= 5; i++) {
```

```
        for(k = 5; k > i; k--) {
```

```
            printf(" ");
```

```
        }
```

```
        for(j = 1; j <= i; j++) {
```

```
            printf("%d", j);
```

```
        }
```

```
        printf("\n");
```

```
    }
```

```
    return 0;
```

```
}
```

**15.Print: 5
 45
 345
 2345
 12345**

❖ **Input:**

```
#include <stdio.h>
```

```
int main() {
```

```
    int i, j, k;
```

```
    for(i = 5; i >= 1; i--) {  
        for(k = 1; k < i; k++) {  
            printf(" ");  
        }  
        for(j = i; j <= 5; j++) {  
            printf("%d", j);  
        }  
        printf("\n");  
    }
```

```
    return 0;
```

```
}
```


16.Print: 1234554321

1234 4321

123 321

12 21

1 1

12 21

123 321

1234 4321

1234554321

❖ **Input:**

```
#include <stdio.h>
```

```
int main() {
```

```
    int i, j, k;
```

```
    for(i = 5; i >= 1; i--) {
        for(j = 1; j <= i; j++) {
            printf("%d", j);
        }
        for(k = i; k < 5; k++) {
            printf(" ");
        }
        for(k = i; k < 5; k++) {
            printf(" ");
        }
        for(j = i; j >= 1; j--) {
            printf("%d", j);
        }
        printf("\n");
    }
```

```
    for(i = 2; i <= 5; i++) {
        for(j = 1; j <= i; j++) {
            printf("%d", j);
        }
        for(k = 5; k > i; k--) {
            printf(" ");
        }
        for(k = 5; k > i; k--) {
            printf(" ");
        }
        for(j = i; j >= 1; j--) {
            printf("%d", j);
        }
    }
```

```
        }  
        printf("\n");  
    }  
  
    return 0;  
}
```

**17.Print: 1
 121
 12321
 1234321
 123454321**

❖ **Input:**

```
#include <stdio.h>
```

```
int main() {
```

```
    int i, j, k;
```

```
    for(i = 1; i <=5; i++) {
```

```
        for(k = 5; k > i; k--) {
```

```
            printf(" ");
```

```
        }
```

```
        for(j = 1; j <= i; j++) {
```

```
            printf("%d", j);
```

```
        }
```

```
        for(j = i - 1; j >= 1; j--) {
```

```
            printf("%d", j);
```

```
        }
```

```
        printf("\n");
```

```
    }
```

```
    return 0;
```

```
}
```

18.Print: 12345
 1234
 123
 12
 1

❖ **Input:**

```
#include <stdio.h>

int main() {

    int i, j, k;

    for(i = 5; i >= 1; i--) {
        for(k = i; k <= 5; k++) {
            printf(" ");
        }
        for(j = 1; j <= i; j++) {
            printf("%d", j);
        }
        printf("\n");
    }

    return 0;
}
```

**19.Print: 12345
 2345
 345
 45
 5**

❖ **Input:**

```
#include <stdio.h>

int main() {

    int i, j, k;

    for(i = 1; i <= 5; i++) {
        for(k = 1; k < i; k++) {
            printf(" ");
        }
        for(j = i; j <= 5; j++) {
            printf("%d", j);
        }
        printf("\n");
    }

    return 0;
}
```

**20.Print: 1
 21
 321
 4321
 54321**

❖ **Input:**

```
#include <stdio.h>
```

```
int main() {  
    int i, j, k;  
  
    for(i = 1; i <= 5; i++) {  
        for(k = 5; k > i; k--) {  
            printf(" ");  
        }  
        for(j = i; j >= 1; j--) {  
            printf("%d", j);  
        }  
        printf("\n");  
    }  
  
    return 0;  
}
```

21.Print: 1

21

321

4321

54321

4321

321

21

1

❖ **Input:**

```
#include <stdio.h>
```

```
int main() {
```

```
    int i, j, k;
```

```
    for(i = 1; i <= 5; i++) {
```

```
        for(j = i; j >= 1; j--) {
```

```
            printf("%d", j);
```

```
        }
```

```
        printf("\n");
```

```
    }
```

```
    for(i = 4; i >= 1; i--) {
```

```
        for(j = i; j >= 1; j--) {
```

```
            printf("%d", j);
```

```
        }
```

```
        printf("\n");
```

```
    }
```

```
    return 0;
```

```
}
```

**22.Print: 1
 12
 123
 1234
 12345
 2345
 345
 45
 5**

❖ **Input:**

```
#include <stdio.h>
```

```
int main() {  
    int i, j, k;  
  
    for(i = 1; i <= 5; i++) {  
        for(k = 5; k > i; k--) {  
            printf(" ");  
        }  
        for(j = 1; j <= i; j++) {  
            printf("%d", j);  
        }  
        printf("\n");  
    }  
    for(i = 2; i <= 5; i++) {  
        for(k = 1; k < i; k++) {  
            printf(" ");  
        }  
        for(j = i; j <= 5; j++) {  
            printf("%d", j);  
        }  
        printf("\n");  
    }  
  
    return 0;  
}
```


